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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,646	03/16/2004	Harlan Seymour	20423-08590	3936
34415	7590	08/09/2007		
SYMANTEC/ FENWICK SILICON VALLEY CENTER 801 CALIFORNIA STREET MOUNTAIN VIEW, CA 94041			EXAMINER LEWIS, ALICIA M	
			ART UNIT 2164	PAPER NUMBER
			NOTIFICATION DATE 08/09/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/802,646

Applicant(s)

SEYMOUR ET AL.

Examiner

Alicia M. Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-15 and 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.


SAM RIMELL
PRIMARY EXAMINER

DETAILED ACTION

This office action is responsive to communication filed May 23, 2007. Claims 1, 2, 5 and 14 have been amended. Therefore, claims 1-6, 8-15 and 17-22 are pending in this application.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 5, 6, 8-15 and 17-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 5, 6 and 8-13 are directed to a method for adjusting access to a database. This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for a final step of adjusting authorized database accesses by changing settings. This produced result is not made tangible to a user, thus remains in the abstract and fails to achieve the required status of having real world value.

Claims 14, 15 and 17-22 are directed to a computer-readable medium containing instructions for adjusting access to a database. This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for a final step of adjusting authorized database accesses by changing setting. This produced result is not made tangible to a user, thus remains in the abstract and fails to achieve the required status of having real world value.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5, 8, 9, 11-14, 17, 18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattsson (US Patent Application Publication 2003/0101355 A1) in view of Ludwig et al. (US Patent Application Publication 2003/0167229 A1).

With respect to claim 1, Mattson teaches an apparatus for empirically adjusting access to a database, said apparatus comprising:

coupled to the database, a database discovery module configured to determine database structure and authorized accesses to the database (paragraphs 32 and 34-36);

coupled to the database, a command monitoring module configured to monitor actual accesses to the database (paragraphs 33 and 50); and

coupled to the database discovery module and to the command monitoring module, an analysis module configured to compare actual accesses with authorized accesses and configured to adjust authorized accesses taking into account results of the comparing by changing settings within a database access control module (paragraphs 37-39, 42-46 and 52).

Mattson does not teach denying future database access to operations by certain users on database tables and columns that were previously authorized but not observed by the command monitoring module.

Ludwig teaches a modular business transactions platform (see abstract), in which he teaches denying future database access to operations by certain users on database tables and columns that were previously authorized but not observed by the command monitoring module (paragraph 51).

It would have been obvious to a person having ordinary skill in that art at the time the invention was made to have modified Mattson by the teaching of Ludwig because denying future database access to operations by certain users on database tables and

columns that were previously authorized but not observed by the command monitoring module would enable Mattson's intrusion detection system to be used in processing financial transactions and would provide more security measures to prevent intrusion, thus providing more functionality (Ludwig, paragraph 51).

With respect to claim 2, Mattson as modified teaches the apparatus of claim 1 further comprising, coupled to the database discovery module and to the analysis module, a storage area configured to accumulate data generated by the command monitoring module (Mattson, paragraph 33).

With respect to claim 3, Mattson as modified teaches the apparatus of claim 1 wherein the command monitoring module is a sniffer (Mattson, paragraph 5).

With respect to claims 5 and 14, Mattson as modified teaches:

discovering authorized accesses to the database (Mattson, paragraphs 32 and 34-36);

observing actual accesses to the database (Mattson, paragraphs 33 and 50);

comparing actual accesses with authorized accesses (Mattson, paragraphs 37 and 42); and

adjusting authorized database accesses taking into account results of the comparing step by changing settings within a database access control module to deny future database access to operations by certain users on database tables and columns

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that were previously authorized but were not observed during the observing step (Mattson, paragraphs 37-39, 42-46 and 52; Ludwig, paragraph 51).

With respect to claims 8 and 17, Mattson as modified teaches wherein the discovering step uncovers any:

- tables of the database (Mattson, paragraph 32);
- columns of the database (Mattson, paragraph 32);
- authorized users of the database (Mattson, paragraph 34);
- views of the database (Mattson, paragraph 32);
- stored procedures of the database Mattson, (paragraph 53);
- user-defined functions of the database (Mattson, paragraph 53); and
- triggers of the database (Mattson, paragraph 53).

With respect to claims 9 and 18, Mattson as modified teaches wherein the adjusting step comprises at least one of:

- suggesting revised database access control settings to a database administrator;
- automatically hardening the database for all times of day (Mattson, paragraph 48);
- automatically hardening the database selectively based on time of day;
- alerting a database administrator (Mattson, paragraphs 43, 44 and 46); and
- continuing to monitor accesses to the database after conclusion of the observing step.

With respect to claims 11 and 20, Mattson as modified teaches wherein the database is automatically hardened using database specific application programming interfaces (Mattson, paragraphs 46 and 48).

With respect to claims 12 and 21, Mattson as modified teaches wherein the observing step has a preselected duration (Mattson, paragraph 50).

With respect to claims 13 and 22, Mattson as modified teaches wherein the observing step is performed until a preselected quantity of actual accesses have been observed (Mattson, paragraphs 33 and 50).

A preselected quantity can be any number of accesses, including just one access.

4. Claim 4, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattsson (US Patent Application Publication 2003/0101355 A1) in view of Ludwig et al. (US Patent Application Publication 2003/0167229 A1), as applied to claims 1-3, 5, 8, 9, 11-14, 17, 18 and 20-22 above, and further in view of Low et al. ("DIDAFIT: Detecting Intrusions in Databases through Fingerprinting Transactions") ('Low').


With respect to claim 4, Mattson as modified teaches claim 1.

Mattson as modified does not teach wherein the database is a relational database accessed by a structured query language.

Low teaches a method for using fingerprints to detect illegitimate accesses to databases (see abstract) in which he teaches wherein the database is a relational database accessed by a structured query language (abstract).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Mattson by the teaching of Low because wherein the database is a relational database accessed by a structured query language would enable a fingerprinting process to be used to detect anomalous database accesses involving SQL statements (Low, column 1, page 122).

With respect to claims 10 and 19, Mattson as modified teaches wherein the database is automatically hardened using standard SQL commands (Low, abstract, page 126, column 1; Mattson, paragraphs 46 and 48).

 5. Claims 6, 7, 15 ~~and 16~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattsson (US Patent Application Publication 2003/0101355 A1) in view of Ludwig et al. (US Patent Application Publication 2003/0167229 A1), as applied to claims 1-3, 5, 8, 9, 11-14, 17, 18 and 20-22 above, and further in view Vaitzblit et al. (US Patent Application Publication 2005/0097149 A1) (Vaitzblit').

With respect to claims 6 and 15, Mattson as modified teaches claims 5 and 14.

Mattson as modified does not teach further comprising the step of generating at least one third party report based upon observing actual accesses to the database.

Vaitzblit teaches a data audit system (see abstract), in which he teaches further comprising the step of generating at least one third party report based upon observing actual accesses to the database (paragraphs 11 and 48-51).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Mattson by the teaching of Vaitzblit because teach further comprising the step of generating at least one third party report based upon observing actual accesses to the database would enable an efficient data audit system that would help organizations address data privacy and security issues (Vaitzblit, paragraph 7), and to additionally detect anomalies (Vaitzblit, paragraph 19).

Response to Arguments

6. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant argues that claims 5, 6, 8-15 and 17-22 recite patentable subject matter. Examiner disagrees. The manipulation of data does NOT represent patentable subject matter under 35 U.S.C 101. The recited subject matter fails to produce a result that is tangible to a user.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Lewis whose telephone number is 571-272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alicia Lewis
August 3, 2007


SAM RIMELL
PRIMARY EXAMINER